U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Mahan Mercury ER - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: **POLREP #2**
Continuation of Clean Up
Mahan Mercury ER

Hazel Park, MI
Latitude: nonresponsive **Longitude:** nonresponsive

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From: Tricia Edwards, OSC
Date: 2/19/2014
Reporting Period: 2/17/14 - 2/19/14

1. Introduction

1.1 Background

Site Number:		**Contract Number:**	
D.O. Number:		**Action Memo Date:**	
Response Authority:	CERCLA	**Response Type:**	Emergency
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	2/17/2014	**Start Date:**	2/17/2014
Demob Date:		**Completion Date:**	
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category
Emergency Response

1.1.2 Site Description
Oakland County HazMat Team notified the NRC of a residential mercury spill Sunday evening, February 16, 2014 (NRC #1074194). The homeowner was attempting to change a light fixture when debris fell down on him. Elemental mercury was present in the debris.

Hazel Park Fire Department (FD) and Oakland County HazMat responded to the residence. Visible mercury in small puddles and beads were observed in a void space between the upstairs floor and the ceiling of the downstairs room. Beads were also observed on the floor in the mud room and on the steps.

EPA responded to the site on Sunday evening to assess the site, as well as meet with the homeowner to get access to the property.

EPA, ERRS, and START met with Oakland County HazMat, Hazel Park FD, and the homeowners on site on Monday, February 17, 2014 to explain the plan and start the clean up.

1.1.2.1 Location

Non-responsive

1.1.2.2 Description of Threat
Elemental Mercury

Mercury poses a threat through inhalation, ingestion, and direct contact routes of exposure, and can result in severe nausea, vomiting, abdominal pain, bloody diarrhea, kidney and liver damage, and even death. Metallic mercury is highly toxic when inhaled, and attacks the central nervous system by destroying neurons.

Mercury is a characteristic waste under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901 et seq., as amended, and 40 CFR 261.24. Mercury exhibits the characteristics of toxicity D009, and is therefore a hazardous substance under Section 101(14) of CERCLA, 42 U.S.C. 9601(14).

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results
Elemental mercury was visible in the void space between the upstairs floor and the downstairs ceiling. When the light fixture was removed and the mercury fell from the ceiling, beads were then identified on the floor in the mud room and the laundry room. Upon further investigation, mercury beads were visible on the stairs.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative
The homeowner was attempting to change out a light fixture in the mud room when he dislodged the existing light fixture, debris fell down on him. Elemental mercury was present in the debris that fell from the ceiling. The homeowner disrobed in the adjoining laundry room most of his clothing and showered. He placed his shirt on the comforter in the bedroom.

The homeowner attempted to clean up the mercury beads with a damp paper towel. The paper towel was placed in a plastic bag. He also started to vacuum the mercury with the hose on the vacuum. Concerned about his exposure and that of his family, the homeowner contacted Pollution Control. Hazel Park Fire Department (HPFD) responded to the residence. Oakland County HazMat (OC HazMat) team was dispatched to the residence to assess the site.

The family was directed to leave the premises due to the potential contamination. The furnace was turned down to the lowest setting. The contaminated clothing and the comforter were bagged and set outside.

The HazMat team collected the visible mercury on the floor of the mud room and on the steps leading upstairs. The mercury was containerized and staged outside.

2.1.2 Response Actions to Date

EPA, ERRS, and START mobilized to the site on Monday, February 17, 2014, and continued mercury removal and screening activities, and several heating and venting cycles, through February 20, 2014.

As part of the screening activities, on February 18 and 19, 2014, START and ERRS worked together to screen 50 additional bags that contained personal items from the house. Of these bags, fifteen had a mercury level greater than 10,000 ng/m3 (with a range between 11,600 and 72,000 ng/m3). Five of these bags had a mercury level between 10,000 and 15,000 ng/m3, and were placed in the garage for later venting. The additional ten bags were staged for later disposal.

Beginning during the late afternoon hours of February 17, 2014, and continuing into the early morning hours of February 18, 2014, ERRS initiated heating and venting cycles within the house.

From 0757 to 0819, on February 18, 2014, START screened the mudroom and the rooms located on the second floor of the house. The screening results in the mudroom ranged between 3,472 and 5,763 ng/m3. The screening results in the rooms located on the second floor ranged between 436 and 571 ng/m3.

Given the mercury levels observed in the laundry room on February 17, 2014 and the levels detected in the mudroom on February 18, 2014, ERRS removed the linoleum flooring in the laundry room and the ceramic tiles located in the mudroom.

Following additional heating and venting cycles, another screening round of the first floor of the house took place during the afternoon of February 18, 2014. The screening results ranged between 706 and 1,725 ng/m3 for the areas of the first floor outside of the mudroom and laundry room. The screening results for the laundry room ranged between 774 and 1,159 ng/m3, while the screening results for the mudroom ranged between 216 and 524 ng/m3.

Beginning during the late afternoon hours of February 18, 2014, and continuing into the early morning hours of February 19, 2014, ERRS initiated heating and venting cycles within the house.

From 0729 to 0809, on February 19, 2014, START and EPA worked together in screening the rooms located on the first and second floors of the house. The screening results for the upstairs rooms ranged between 538 and 1,377 ng/m3, while the results for the first floor rooms ranged between 413 and 2,559 ng/m3. Given the screening results, ERRS initiated additional heating and venting cycles.

After completing the additional heating and venting cycles on February 19, 2014, START and EPA worked together on rescreening the house. The screening results for the upstairs ranged from 111 to 2,200 ng/m3, while the results for the first floor ranged from 91 to 3,467 ng/m3. Due to the results seen during this screening run, additional heating cycles took place from the late afternoon of February 19 into the early morning hours of February 20.

non responsive redactions follow

Also on February 19, 2014, START conducted a screening run at [redacted] in [redacted] as a result of the residents at [redacted] having taken clothes from their residence to the residence located at [redacted]. The screening results indicated that no mercury contamination existed at nonresponsive and that the items taken from [redacted], which were screened in plastic bags, ranged from 68 to 4,176 ng/m3. It was requested that the bags of clothes be removed from the residence.

From 0802 to 0817, on February 20, 2014, START and EPA rescreened the residence at [redacted] Street. The screening results for the upstairs ranged from 214 to 825 ng/m3, while the screening results for the first floor of the house ranged from 158 to 613 ng/m3. However, due to the fact that the temperature in the laundry room, mudroom, and upstairs was not above 70 degrees Fahrenheit, EPA

had ERRS increase the temperature in the house so that these three areas would be at or above 70 degrees Fahrenheit.

After the temperature in the house reached at least 70 degrees Fahrenheit, START and EPA rescreened the upstairs, mudroom, and laundry room. While both the adult and child breathing zones were below 1,000 ng/m3, elevated readings, greater than 1,000 ng/m3 were still observed on the floors of the laundry room and one of the steps leading from the mudroom to the upstairs. As a result, ERRS painted the floor of the laundry room and steps leading from the mudroom to the upstairs with encapsulating paint.

The Hazel Park Fire Chief coordinated with Hazel Park Department of Public Works (DPW) so that a roll off box could be staged in their yard. The roll off box was dropped at the DPW around 1430. ERRS lined the roll off box, then loaded the bagged waste. The elemental mercury was stored in a 5-gallon pail separately.

After the paint dried, START, EPA, and ERRS screened the stairs and the floor of the laundry room. The screening results ranged from 559 to 995 ng/m3, at a temperature of 70 to 71 degrees Fahrenheit.

Following this round of screening, the homeowners were notified that they could return to their residence.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)
No enforcement activities anticipated. Although, the project will be reviewed by the enforcement team.

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*

2.2 Planning Section

2.2.1 Anticipated Activities
Restoration of ceiling and floor.

2.2.1.1 Planned Response Activities

2.2.1.2 Next Steps

2.2.2 Issues

2.3 Logistics Section
No information available at this time.

2.4 Finance Section

2.4.1 Narrative
START and ERRS were activated to respond to the response.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				

ERRS - Cleanup Contractor	$20,000.00	$15,339.20	$4,660.80	23.30%
TAT/START	$10,000.00	$5,400.00	$4,600.00	46.00%
Intramural Costs				
Total Site Costs	$30,000.00	$20,739.20	$9,260.80	30.87%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

2.5.1 Safety Officer
OSC

2.5.2 Liaison Officer
OSC

2.5.3 Information Officer
OSC

3. Participating Entities

3.1 Unified Command
N/A

3.2 Cooperating Agencies
US EPA
Hazel Park Fire Department
Oakland County HazMat

4. Personnel On Site

US EPA - 1
START (Weston) - 1
ERRS - 3 (ER)
Oakland County HazMat - 1

5. Definition of Terms

US EPA - United States Environmental Protection Agency
START - Superfund Technical Assistance and Response Team
ERRS - Emergency and Rapid Response Services
HazMat - Hazardous Materials

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.